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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,516	03/24/2004	Toyohiko Youan	040148	3396
23850	7590	07/27/2005	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP			HOUSE, LETORIA G	
1725 K STREET, NW			ART UNIT	
SUITE 1000			PAPER NUMBER	
WASHINGTON, DC 20006			3672	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,516

Applicant(s)

YOUAN, TOYOHICO

Examiner

Letoria House

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the reamer main body (8), the rod connection portion (24), the rod (3), the cover (74) the coupling structure (7) and clearance (79) in the configuration as claimed. Applicant has shown the claimed subject matter as components, but has failed to show the invention as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Nowak (U.S. 5,580,188).

With regard to claim 1, Nowak discloses a substantially hollow (60) conical reamer main body (45) which diameter reduces towards a drawing side; a rod connecting portion (See figure 2) provided at a narrow diameter end portion of the reamer main body and connected with a rod (40); and a coupling structure provided on an opposite side of the rod connecting portion, wherein the coupling structure has a Swivel joint that allows rotation of the reamer main body with respect to the buried pipe (48), and a main portion of the Swivel joint is substantially accumulated in the reamer main body.

With regard to claim 5, the reference discloses the apparatus (45) comprising a substantially hollow conical reamer main body (45) which diameter reduces towards a drawing side; wherein a partitioning member is disposed in the vicinity of an aperture of the reamer main body on a side of a buried pipe (40), a passage is formed within the reamer main body (45) through which drilling fluid (62) is supplied for injecting the drilling fluid to a portion to be drilled through emission ports (47), and an injection tip is

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provided at the partitioning member through which the drilling fluid that has entered the passage is discharged to the side of the buried pipe.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nowak (U.S. 5,580,188) in view of Elorriaga, Jr. (U.S. 4,478,438)

Nowak discloses a reamer comprising a connector rod, swivel connection, and fluid emission ports as applied to claims 1 and 5 above, in addition Nowak discloses a clearance between an end portion of the cover on the buried pipe side, however, Nowak fails to disclose the swivel joint sealed by a floating seal, a cover for preventing intrusion of sediments surrounding the coupling structure, wherein an end portion of the cover is

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plunged into the reamer main body. Elorriga, Jr. discloses a downhole swivel joint assembly (10) that is sealed by a sealing member (60) having a cover (84) for preventing intrusion of sediments while a clearance is formed between the end portion of the cover (16) for preventing intrusion of sediments on a side of the male piping section; the cover (16) being capable of being sized in that an end portion thereof on the reamer main body side is plunged into the reamer main body. Elorriga, Jr. suggests that a seal and cover configuration is useful to prevent leaking of bearing fluids and to prevent dust and other formation elements from contacting the bearings. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the swivel joint of Nowak to include the seal and cover configuration of Elorriga, Jr. in order to lengthen the tool life of the reamer assembly by minimizing formation element intrusion into the bearing housing.

Conclusion

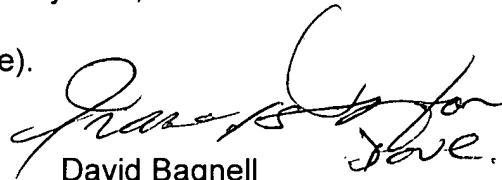
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and patent applications disclose reamers with swivel joints or swivel joint configurations: Shaw (U.S. 2003/0181245), Rankin et al. (U.S. 6,668,946), Takada et al. (U.S. 4,026,371) Cherrington (U.S. 4,176,985 and 5,375,669), Wentworth et al. (U.S. 6,755,593), Frost (U.S. 6,752,433), Wilson et al. (U.S. 4,079,969), McCracken (4,205,866), Huston (5,286,063), and Halderman et al. (5,176,211) .

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Letoria House whose telephone number is (571) 272-8118. The examiner can normally be reached on M-F, 7:00 A.M. - 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David Bagnell
Supervisory Patent Examiner
Art Unit 3672

LGH